

as at least a portion of each of said electrode terminal leads extends outwardly from said heat weld layer.

26. A nonaqueous-electrolyte battery according to claim 25 wherein said sealant resin comprises a single heat welding resin.

27. A nonaqueous-electrolyte battery according to claim 26 wherein said heat-welding resin is selected from the group consisting of at least one of polyolefin, ethylene-acrylate copolymer, ethylene-methacrylate copolymer, ionomer resin and carboxylic resin.

28. A nonaqueous-electrolyte battery according to claim 27 wherein said polyolefin is an acid denatured polyolefin.

29. A nonaqueous-electrolyte battery according to claim 25 wherein said sealant resin is a multilayer sealant resin that is formed by combining a heat welding resin and a resin that has a resin melting point which is higher than a heat welding resin melting point of said heat welding resin.

30. A nonaqueous-electrolyte battery according to claim 29 wherein said heat welding resin melting point and said resin melting point have a difference of 22°C or greater.

31. A nonaqueous-electrolyte battery according to claim 29 wherein said heat welding resin is selected from the group consisting of at least one of polyolefin, ethylene-acrylate copolymer, ethylene-methacrylate copolymer, ionomer resin and

carboxylic resin, and wherein said resin is selected from the group consisting of at least one of polyimide, polyamide, and polyester.

32. A nonaqueous-electrolyte battery according to claim 31 wherein said polyolefin is an acid denatured polyolefin.

5 33. A nonaqueous-electrolyte battery according to claim 29 wherein said sealant resin comprises a base material that includes a resin, said resin has a resin melting point that is higher than a heat welding resin melting point of said heat welding resin, said heat welding resin being formed on each of a first and second side of said base material.

10 34. A nonaqueous-electrolyte battery according to claim 29 wherein said heat welding resin is applied by coating.

35. A nonaqueous-electrolyte battery according to claim 25 wherein said sealant resin comprises a sealant resin length that is greater than a thickness of said battery case.

15 36. A nonaqueous-electrolyte battery according to claim 25 wherein said sealant resin comprises a sealant resin thickness that ranges from 10 μ m to 500 μ m.

37. A nonaqueous-electrolyte battery according to claim 25 wherein said unit cell comprises at least one of a gel electrolyte and a solid electrolyte that each contain a matrix polymer and a lithium salt.

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cont

38. A nonaqueous-electrolyte battery according to claim 25 wherein said unit cell comprises a negative electrode that contains a negative electrode material so as to permit doping and dedoping of lithium.

39. A nonaqueous-electrolyte battery according to claim 38 wherein said negative electrode material comprises a carbon material.

40. A nonaqueous-electrolyte battery according to claim 25 wherein said unit cell comprises a positive electrode that contains a composite oxide of lithium and a transition metal.

41. A method of manufacturing a nonaqueous-electrolyte battery comprising the step of:

providing a unit cell that includes a plurality of electrodes and a plurality of electrode terminal leads that are electrically connected to said respective electrodes;

enclosing said unit cell within a battery case so as at least a portion of each of said electrode terminal leads extends outwardly from said case;

sealingly enclosing said battery case by providing a heat welding apparatus so as to apply a sealant resin to at least a portion of each of said electrode terminal leads that is enclosed by said battery case, said heat welding apparatus including a plurality of heater heads that at least one of said heater heads has an elastic member for contacting said sealant resin so as to thermally apply said sealant resin to each of said electrode terminal leads.

42. A method of manufacturing a nonaqueous-electrolyte battery according to claim 41 wherein said elastic member comprises a melting point of 100°C or greater.

43. A method of manufacturing a nonaqueous-electrolyte battery according to claim 41 wherein said elastic member is selected from the group consisting of at least one of silicon rubber, polytetrafluoroethylene, polyurethane, polyimide, polyamide and polyester.

44. A method of manufacturing a nonaqueous-electrolyte battery according to claim 41 wherein said elastic member comprises a thickness that ranges from greater than or equal to 10µm to less than 2 cm.

45. A heat welding apparatus comprising:

a heat welding support frame that includes a first and second support boards and a plurality of support columns that are attached to said respective support boards so as to define said heat welding support frame;

a first and second heater heads that are attached to said respective support boards for contacting an article so as to heat weld said article;

an elastic member attached to at least one of said first and second heater heads so as to provide a heat weld surface for heat welding at least a portion of said article.

46. A heat welding apparatus according to claim 45 wherein said elastic member comprises a melting point of 100°C or greater.

Amended

47. A heat welding apparatus according to claim 45, wherein said elastic member is selected from the group of at least one of silicon rubber, polytetrafluoroethylene, polyurethane, polyimide, polyamide and polyester.

5 48. A heat welding apparatus according to claim 45, wherein said elastic member comprises a thickness that ranges from greater than or equal to 10 μ m to less than 2 cm.

IN THE ABSTRACT:

Please enter the Abstract attached hereto, on separately numbered page 9.

REMARKS:

10 The present amendment makes changes in the specification, claims and abstract in order to conform to United States patent practice.

None of the changes in the claims is intended as a surrender of any of the subject matter within the scope of the original claim language since, as noted above, all of these changes have been solely to bring the claims into conformity
15 with the requirements of 35 U.S.C. § 112, second paragraph.

Early consideration of the application is respectfully requested.

Respectfully submitted,

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